



DEPARTMENT OF THE INTERIOR

INFORMATION SERVICE

UNITED STATES FISH AND WILDLIFE SERVICE

For Release to PM's, FEBRUARY 12, 1957

RESEARCH VESSELS FIND BOUNDARIES FOR ALBACORE DISTRIBUTION

Although the albacore--source of choice white-meat tuna--probably does not realize it, it is actually fenced in by an "isotherm", a "thermocline", and a food boundary.

So report the two Fish and Wildlife Service research vessels--the Manning and the Gilbert--which have completed fall surveys in the broad Pacific, verifying data which had previously been assembled.

It seems that water colder than 57 degrees has no appeal to the albacore. In hundreds of miles of experimental fishing, temperature-taking and water sampling, the crews of these vessels could find no albacore on the cold side of the "isotherm"--the meandering, unstable line along which the temperature is 57 degrees.

Likewise, the researchers verified information that the albacore stays above the "thermocline", an imaginary sheet which separates the warm waters of the surface from the very cold waters below. The thermocline is sometimes only a few feet down and sometimes 200 feet or more below the surface.

The third limit to the distribution of albacore--the "food boundary"--is the barren water where few of the microscopic animals which are the basis for fish food exist. This boundary can sometimes be recognized by the color of the water and sometimes only by scrutinizing samples of the water with a microscope.

All of this may seem relatively unimportant to the landsman but to the men in the boats--the men who help feed America by bringing in the fish--such findings are important. Showing these fisherman where not to look can make the difference between well-utilized hours and a lot of wasted time--for much of the albacore fisherman's time is spent in seeking fish.

Nor is the albacore the only fish limited by such things as isotherms, thermoclines, and food supplies. Each species of fish, like every other animal, has its habitat--conditions under which it can live and conditions under which it can't. There are some 200 kinds of fishes in the ocean which are currently being used for food. As the ocean is a restless mass, these various boundaries with their high sounding names continually change.

Correctly reading the pattern of the distribution of fishes in the wide waters of the oceans leads to more efficient and economical fishing operations, hence the value of research.

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